State Maps and Prescriptive Packages

April 2000

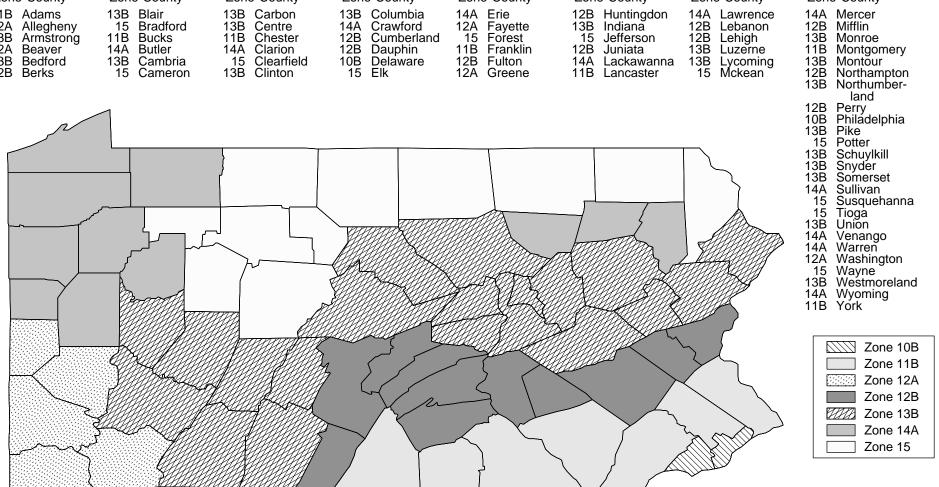
The State Maps and Prescriptive Packages contain supporting materials that are needed when using the Envelope and Mechanical Compliance Guides. Insulation and other building envelope requirements and some mechanical system requirements vary by climate. The State Maps divide the United States into 33 different climate zones at a county level. Zones are numbered from 1 through 19 (consistent with the IECC and MEC*check* climate zones) and have a, b, and c designations to reflect climate differences that affect cooling; e.g., cooling degree days and solar radiation. The climate maps are unchanged from Version 1.

To determine the climate zone to use with your building, locate the map for your state and identify the zone number from the legend or county list.

To determine insulation and other building envelope requirements, find the prescriptive package number corresponding to your climate zone. The *Envelope Compliance Guide* employs a package approach that requires all components in your design to meet or exceed the prescribed efficiency levels contained in the prescriptive package. If you find the prescriptive packages too constraining, consider using the COM *check-EZ* software, which allows tradeoffs among building envelope components.

PENNSYLVANIA

Zone County 11B Adams 12A Allegheny 13B Armstrong 12A Beaver	Zone County 13B Blair 15 Bradford 11B Bucks 14A Butler	Zone County 13B Carbon 13B Centre 11B Chester 14A Clarion	Zone County 13B Columbia 14A Crawford 12B Cumberland 12B Dauphin	Zone County 14A Erie 12A Fayette 15 Forest 11B Franklin	Zone County 12B Huntingdon 13B Indiana 15 Jefferson 12B Juniata	Zone County 14A Lawrence 12B Lebanon 12B Lehigh 13B Luzerne
13B Bedford 12B Berks	13B Cambria 15 Cameron	15 Clearfield 13B Clinton	10B Delaware 15 Elk	12B Fulton 12A Greene	14A Lackawanna 11B Lancaster	13B Lycoming 15 Mckean
	_					



Zone County

Climate Zone 10b

Envelope Component	(0-10%	Fenestratior 6 Window-Wall			ım Fenestratio 25% Window-Wal			Fenestration		Very High Fenestration Area (40%-50% Window-Wall Ratio)			
Malla (a)	No Framing or	Metal r Framing	Wood or Framing	No Framing o	Metal or Framing o	Wood or Framing	No Framing o	Metal or Framing	Wood or Framing	No Framing	Metal or Framing	Wood or Framing	
Walls (a)	_	•	_			_					•		
Framed Minimum R-Value Any Spacing	NA	11	11	NA	11	11	NA	11	11	NA	11	11	
CMU, 8 in. or greater Minimum R-Value	5	11	11	5	11	11	5	11	11	5	11	11	
with Integral Insulation(b)							,						
All Other Minimum R-Value	5	11	11	5	11	11	5	11	11	5	11	11	
Masonry Walls(c)													
		3.25	3.5		3.25	3.5		3.25	3.5		3.25	³.5	
NAC - 1	No		3.5	No		3.5	No		3.5	No			
Windows	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	
Maximum Solar Heat Gain Coefficient	1 .									1			
Maximum U-Factor	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5	
Maximum O-ractor	Any	Any	Any	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	
	Ally	Ally	Any	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Skylight (Limit 3% of Roof Area)													
Maximum U-Factor		0.8			0.8			0.8			0.8		
Waximum 6 Factor		0.0			0.0			0.0			0.0		
	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	
Roof	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss	modiation	<u>.</u>	modiation	caiation	<u>.</u>	mountaion	modiation	0.	modianon	modiation	<u>.</u>	modiation	
Minimum R-Value	17		19	19		25	19		25	19		25	
Nonwood Joist/Truss			10	- 10						- 10			
Minimum R-Value	18		25	20		25	20		25	20		25	
Concrete Slab or Deck													
Minimum R-Value	17		NA	19		NA	19		NA	19		NA	
Metal Purlin with Thermal Break													
Minimum R-Value	18		30	20		30	20		30	20		30	
Metal Purlin without Thermal Break Minimum R-Value	18		x	20		х	20		х	20		30	
Minimum K-Value	10		^			^	20		^	20		30	
	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	Continuous	•	Cavity	
Floor	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss													
Minimum R-Value	12		19	12		19	12		19	12		19	
Nonwood Joist/Truss													
Minimum R-Value	13		19	13		19	13		19	13		19	
Concrete Slab or Deck	13		NA	13		NA	13		NA	12		NA	
Minimum R-Value	13		NA	13		NA	13		NA	13		NA	
Slab Edge or Basement Walls		Insulation			Insulation			Insulation			Insulation		
Minimum R-Value		0			0			0			0		

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
- (c) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

Climate Zone 11b

Envelope Component Low Fenestration Area (0-10% Window-Wall Ratio)					ım Fenestratio 25% Window-Wal			Fenestration		Very High Fenestration Area (40%-50% Window-Wall Ratio)			
	No	Metal	Wood	No	Metal	Wood	No	Metal	Wood	No	Metal	Wood	
Walls (a,b)	Framing o	•	or Framing			or Framing	Framing or	-	or Framing	Framing	•	or Framing	
Framed Minimum Cavity R-Value (c)	NA	11	11	NA	11	11	NA	11	11	NA	13	11	
Any Spacing Minimum Continuous R-Value (d) CMU, 8 in. or greater Minimum Cavity R-Value	NA NA	0 11	0 11	NA NA	0 11	0 11	NA NA	0 11	0 11	NA NA	3 11	0 11	
with Integral Insulation(e) Minimum Continuous R-Value	5	0	0	5	0	0	5 NA	0	0	5 5	0	0	
All Other Minimum Cavity R-Value	NA NA	11	11	NA NA	11	11	NA NA	11	11	NA NA	11	11	
Masonry Walls(f) Minimum Continuous R-Value	5	0	0	5	0	0	5	0	0	5	0	0	
	No Projection	3.25 Projection	3.5	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Deciseotion	
Windows Maximum Solar Heat Gain Coefficient	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	
	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5	
Maximum U-Factor	Any	Any	Any	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	
Skylight (Limit 3% of Roof Area)													
Maximum U-Factor		0.8			0.8			0.8			0.8		
	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	
Roof	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	18		25	19		25	23		30	23		30	
Nonwood Joist/Truss													
Minimum R-Value	19		25	20		25	24		30	24		30	
Concrete Slab or Deck Minimum R-Value	18		NA	19		NA	23		NA	23		NA	
Metal Purlin with Thermal Break			NA.			NA.			NA.			IVA	
Minimum R-Value	19		30	20		30	24		х	24		30	
Metal Purlin without Thermal Break Minimum R-Value	19		х	20		х	24		х	24		38	
	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	
Floor	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	14		19	14		19	14		19	14		19	
Nonwood Joist/Truss Minimum R-Value	15		19	15		19	15		19	15		19	
Concrete Slab or Deck			-			-			-			-	
Minimum R-Value	15		NA	15		NA	15		NA	15		NA	
Slab Edge or Basement Walls		Insulation			Insulation			Insulation			Insulation		
Minimum R-Value		0			0			8			8		

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Where values are shown for both cavity and continuous insulation, both requirements must be met.
- (c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.
- (d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undimished by compression or bridging.
- (e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
- (f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.</p>
- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

Climate Zone 12a

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)				um Fenestratio 25% Window-Wal			Fenestration 0% Window-Wa		Very High Fenestration Area (40%-50% Window-Wall Ratio)			
W-U- (-)		No Framing or	Metal Framing	Wood or Framing	No Framing	Metal or Framing o	Wood or Framing	No Framing o	Metal r Framing	Wood or Framing	No Framing	Metal or Framing	Wood or Framing
Walls (a) Framed	Minimum R-Value	Framing or NA	Framing 11	or Framing	Praming NA	or Framing of	or Framing	Framing o	r Framing	or Framing	NA	or Framing	or Framing
Any Spacing	wiii iii iii ii ii ii ii ii ii ii ii ii	NA.	"		INA		''	NA	"		INA.	13	
CMU, 8 in. or greater with Integral Insulation(b)	Minimum R-Value	5	11	11	5	11	11	5	11	11	5	11	11
All Other Masonry Walls(c)	Minimum R-Value	5	11	11	5	11	11	5	11	11	5	11	11
masoni y wans(c)													
Windows		No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection
Maximum Solar He	eat Gain Coefficient	Any	Any	Any	0.6	0.7	Any	0.5	0.6	0.7	0.4	0.5	0.7
	Maximum U-Factor	Ally	Ally	Ally	0.0	0.7	Any	0.5	0.0	0.7	0.4	0.5	0.7
		Any	Any	Any	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4
Skylight (Limit 3% of Roof Area)												
, ,	Maximum U-Factor		0.8			0.8			0.8			0.8	
		Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous	3	Roof Cavity
Roof		Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation
All-Wood Joist/Truss	Minimum R-Value	16		19	19		25	23		30	23		30
Nonwood Joist/Truss	Minimum R-Value	17		25	20		25	24		30	24		30
Concrete Slab or Deck	Minimum R-Value	16		NA	19		NA	23		NA	23		NA
Metal Purlin with Thermal Break													
Metal Purlin without Thermal Break	Minimum R-Value	17		25	20		30	24		Х	24		30
metal i dilli without incimal break	Minimum R-Value	17		Х	20		Х	24		х	24		38
Floor		Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation
All-Wood Joist/Truss	Minimum R-Value	16		19	16		19	16		19	16		19
Nonwood Joist/Truss													
Concrete Slab or Deck	Minimum R-Value	16		19	16		19	16		19	16		19
	Minimum R-Value	16		NA	16		NA	16		NA	16		NA
Slab Edge or Basement Walls			Insulation			Insulation			Insulation			Insulation	
	Minimum R-Value		0			0			8			8	

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
- (c) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

Climate Zone 12b

Envelope Component Low Fenestration Area (0-10% Window-Wall Ratio)					ım Fenestratio 25% Window-Wal			Fenestration		Very High Fenestration Area (40%-50% Window-Wall Ratio)			
	No	Metal	Wood	No	Metal	Wood	No	Metal	Wood	No	Metal	Wood	
Walls (a,b)	Framing o		or Framing			or Framing	Framing o	-	or Framing	Framing	•	or Framing	
Framed Minimum Cavity R-Value (c)	NA	11	11	NA	11	11	NA	11	11	NA	13	13	
Any Spacing Minimum Continuous R-Value (d) CMU, 8 in. or greater Minimum Cavity R-Value	NA NA	0 11	0 11	NA NA	0 11	0 11	NA NA	0 11	0 11	NA NA	3 11	0 11	
with Integral Insulation(e) Minimum Continuous R-Value	5	0	0	5	0	0	5 NA	0	0	5 5	0	0	
All Other Minimum Cavity R-Value	NA NA	11	11	NA NA	11	11	NA NA	11	11	NA NA	11	11	
Masonry Walls(f) Minimum Continuous R-Value	5	0	0	5	0	0	5	0	0	5	0	0	
	No	3.25	3.5 Deciration	No	3.25	3.5	No	3.25 Decidentian	3.5 Deciration	No	3.25	3.5 Deciseosis	
Windows Maximum Solar Heat Gain Coefficient	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	
	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.3	0.4	0.5	
Maximum U-Factor	Any	Any	Any	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	
Skylight (Limit 3% of Roof Area)													
Maximum U-Factor		0.8			0.8			0.8			0.8		
	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	
Roof	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	16		19	19		25	23		30	23		30	
Nonwood Joist/Truss						0.5	-						
Minimum R-Value Concrete Slab or Deck	17		25	20		25	24		30	24		30	
Minimum R-Value	16		NA	19		NA	23		NA	23		NA	
Metal Purlin with Thermal Break													
Minimum R-Value	17		25	20		30	24		X	24		38	
Metal Purlin without Thermal Break Minimum R-Value	17		х	20		х	24		х	24		49	
	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	
Floor	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	15		19	15		19	15		19	15		19	
Nonwood Joist/Truss Minimum R-Value	16		19	16		19	16		19	16		19	
Concrete Slab or Deck			-	-		-	-		-			-	
Minimum R-Value	16		NA	16		NA	16		NA	16		NA	
Slab Edge or Basement Walls		Insulation			Insulation			Insulation			Insulation		
Minimum R-Value		0			0			8			8		

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Where values are shown for both cavity and continuous insulation, both requirements must be met.
- (c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.
- (d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undimished by compression or bridging.
- (e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
- (f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.</p>
- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

Climate Zone 13b

Envelope Component		Fenestration % Window-Wall			m Fenestratio 5% Window-Wal			Fenestration		Very High Fenestration Area (40%-50% Window-Wall Ratio)			
	No	Metal	Wood	No	Metal	Wood	No	Metal	Wood	No	Metal	Wood	
Walls (a,b) Framed Minimum Cavity R-Value (c)	Framing o	r Framing of	or Framing	Framing o	r Framing o	or Framing 11	Framing o	or Framing of	or Framing	Framing NA	or Framing of	or Framing 13	
Any Spacing Minimum Continuous R-Value (d)	NA NA	0	0	NA NA	0	0	NA NA	0	0	NA NA	7	3	
CMU, 8 in. or greater Minimum Cavity R-Value	NA	11	11	NA	11	11	NA	11	11	NA	11	11	
with Integral Insulation(e) Minimum Continuous R-Value All Other Minimum Cavity R-Value	5 NA	0 11	0 11	5 NA	0 11	0 11	5 NA	0 11	0 11	5 NA	0 11	0	
Masonry Walls(f) Minimum Cavity R-Value Masonry Walls(f) Minimum Continuous R-Value	5 5	0	0	5 5	0	0	5 5	0	0	5 5	0	11 0	
	No	3.25	3.5	No	3.25	3.5	No	3.25	3 .5	No	3.25	3 .5	
Windows	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	
Maximum Solar Heat Gain Coefficient	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.4	0.5	0.6	
Maximum U-Factor	Any	Any	Any	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	
Skylight (Limit 3% of Roof Area)													
Maximum U-Factor		0.8			0.8			0.8			0.8		
	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	
Roof	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	18		25	19		25	23		30	23		30	
Nonwood Joist/Truss Minimum R-Value	19		25	20		25	24		30	24		30	
Concrete Slab or Deck Minimum R-Value	18		NA	19		NA	23		NA	23		NA	
Metal Purlin with Thermal Break	10		IVA	13		NA.	23		NA.	25		IVA	
Minimum R-Value	19		30	20		30	24		Х	24		38	
Metal Purlin without Thermal Break Minimum R-Value	19		х	20		х	24		х	24		49	
	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	
Floor	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	17		19	17		19	17		19	17		19	
Nonwood Joist/Truss Minimum R-Value	17		25	17		25	17		25	17		25	
Concrete Slab or Deck Minimum R-Value	17		NA NA	17		NA NA	17		NA NA	17		NA NA	
within K-value	- ''		IVA			IVA			IVA			INA	
Slab Edge or Basement Walls		Insulation			Insulation			Insulation			Insulation		
Minimum R-Value		0			0			8			8		

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Where values are shown for both cavity and continuous insulation, both requirements must be met.
- (c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.
- (d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undimished by compression or bridging.
- (e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
- (f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.</p>
- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

Climate Zone 14a

Envelope Component		Fenestration % Window-Wall			m Fenestratio			Fenestration		Very High Fenestration Area (40%-50% Window-Wall Ratio)			
Melle (- L)	No Framing o	Metal r Framing	Wood or Framing	No Framing o	Metal or Framing o	Wood or Framing	No Framing o	Metal	Wood or Framing	No	Metal	Wood or Framing	
Walls (a,b) Framed Minimum Cavity R-Value (c)	NA NA	13	or Framing 11	NA NA	13	11	NA NA	13	or Framing 11	NA	13	or Framing 11	
Any Spacing Minimum Continuous R-Value (d)	NA	3	0	NA	3	0	NA	3	0	NA	3	0	
CMU, 8 in. or greater Minimum Cavity R-Value with Integral Insulation(e) Minimum Continuous R-Value	NA 5	11 0	11 0	NA 5	11 0	11 0	NA 5	11 0	11 0	NA 5	11 0	11 0	
All Other Minimum Cavity R-Value	NA	U	11	NA	U	11	NA	U 	11	NA	11	11	
Masonry Walls(f) Minimum Continuous R-Value	5	0	0	5	0	0	5	0	0	5	0	0	
	No	3.25	3.5	No	3.25	3.5	No	3.25	3.5	No	3.25	3.5	
Windows Maximum Solar Heat Gain Coefficient	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	
	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.4	0.5	0.6	
Maximum U-Factor	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	
Skylight (Limit 3% of Roof Area)													
Maximum U-Factor		0.8			0.8			0.8			0.8		
	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	
Roof	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	17		19	19		25	23		30	23		30	
Nonwood Joist/Truss Minimum R-Value	18		25	20		25	24		30	24		30	
Concrete Slab or Deck Minimum R-Value	17		NA	19		NA	23		NA	23		NA	
Metal Purlin with Thermal Break													
Minimum R-Value Metal Purlin without Thermal Break	18		30	20		30	24		Х	24		38	
Minimum R-Value	18		х	20		х	24		х	24		38	
	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	Continuous		Cavity	
Floor	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	18		25	18		25	18		25	18		25	
Nonwood Joist/Truss Minimum R-Value	19		25	19		25	19		25	19		25	
Concrete Slab or Deck			NA NA				-		NA NA			-	
Minimum R-Value	19		NA	19		NA	19		NA	19		NA	
Slab Edge or Basement Walls		Insulation			Insulation			Insulation			Insulation		
Minimum R-Value		0			8			8			8		

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
- (b) Where values are shown for both cavity and continuous insulation, both requirements must be met.
- (c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.
- (d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undimished by compression or bridging.
- (e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
- (f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft2 or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.</p>
- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.

Climate Zone 15

Envelope Component Low Fenestration Area (0-10% Window-Wall Ratio)					m Fenestratio			Fenestration		Very High Fenestration Area (40%-50% Window-Wall Ratio)			
	No	Metal	Wood	No	Metal	Wood	No	Metal	Wood	No	Metal	Wood	
Walls (a,b)	Framing o		or Framing			or Framing	Framing of	•	or Framing	Framing	•	or Framing	
Framed Minimum Cavity R-Value (c)	NA	13	11 0	NA	13	11	NA NA	13	11	NA	13	13	
Any Spacing Minimum Continuous R-Value (d) CMU, 8 in. or greater Minimum Cavity R-Value	NA NA	<u>3</u> 11	11	NA NA	3 11	0 11	NA NA	3 11	0 11	NA NA	7 13	<u>4</u> 11	
with Integral Insulation(e) Minimum Continuous R-Value	5	0	0	5	0	0	5	0	0	5	0	0	
All Other Minimum Cavity R-Value	NA NA	11	11	NA NA	11	11	NA NA	13	11	NA	13	11	
Masonry Walls(f) Minimum Continuous R-Value	5	0	0	5	0	0	6	0	0	6	3	0	
Windows	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection	No Projection	3.25 Projection	3.5 Projection	
Maximum Solar Heat Gain Coefficient		-	,		•		•	,	,		•		
Maximum U-Factor	Any	Any	Any	0.5	0.6	0.7	0.5	0.6	0.7	0.4	0.5	0.7	
Maximum O-Pactor	0.7	0.7	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	
Skylight (Limit 3% of Roof Area)													
Maximum U-Factor		0.6			0.6			0.6			0.6		
	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	Continuous		Roof Cavity	
Roof	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	Insulation	or	Insulation	
All-Wood Joist/Truss Minimum R-Value	19		25	19		25	23		30	23		30	
Nonwood Joist/Truss													
Minimum R-Value	20		25	20		25	24		30	24		30	
Concrete Slab or Deck Minimum R-Value	19		NA	19		NA	23		NA	23		NA	
Metal Purlin with Thermal Break	19		NA .	19		NA	23		NA .	23		NA	
Minimum R-Value	20		30	20		30	24		x	24		38	
Metal Purlin without Thermal Break Minimum R-Value	20		х	20		х	24		х	24		NA	
within the value	-						-						
Floor	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	
All-Wood Joist/Truss Minimum R-Value	22		25	22		25	22		25	22		25	
Nonwood Joist/Truss			20			20			20				
Minimum R-Value Concrete Slab or Deck	23		30	23		30	23		30	23		30	
Concrete Slab or Deck Minimum R-Value	22		NA	22		NA	22		NA	22		NA	
Slab Edge or Basement Walls		Insulation			Insulation			Insulation			Insulation		
Minimum R-Value		0			8			8			8		

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